SONY

HDR-PJ230/B

8GB Full HD Camcorder with Projector

Bring your fondest memories to life with legendary Sony full HD/60P video quality and a built-in projector. This compact camcorder captures over three hours of HD video with 8GB of embedded memory. Best of all, the built-in projector lets you showcase your footage in a big way—up to a 100" (diag) image. SteadyShot™ image stabilization is also included for enhanced clarity and minimized video shake.

Key Features

1920x1080 Full HD 24p/60p w/8.9MP Exmor R® CMOS Sensor

Create cinematic video in high definition 1920 x 1080 24p/60p and high quality 8.9MP still images. Experience stunning low-light sensitivity with improved image clarity and drastically reduced grain with Sony's back-illuminated Exmor® R CMOS sensor. Designed for compact cameras and camcorders, the Exmor® R CMOS sensor relocates the photo diodes above the support circuitry, maximizing the light gathering area per pixel so you can shoot with better results in lower lighting conditions.

Built-in High-Contrast Projector

The high-contrast projector built-in to the LCD panel gives you the freedom to share your favorite memories virtually anywhere. With 13 lumens of brightness, this projector is powerful enough to project up to 100"diagonally.

Up to 3hr 10min recording with 8GB embedded Flash Memory[1]

The built-in 8GB[1] embedded Flash memory can record and store up to 3 hours 10 minutes of high definition video footage (HD LP mode).

SteadyShot™ image stabilization w/ Active Mode

SteadyShot™ image stabilization with Active Mode compensates for greater degrees of camera shake to deliver stunningly smooth video from wide angle to full telephoto shooting. In addition, innovative 3-Way Shake-Canceling adds electronic roll stability for even smoother video capture

32x Extended Zoom to get even closer to the action

Extended Zoom works in conjunction with 27x optical zoom to get even closer to the action while maintaining HD image quality.

29.8mm Carl Zeiss® Vario-Tessar® lens

The professional-quality 29.8mm Carl Zeiss® Vario-Tessar® lens is designed specifically for compact camcorders. Precision ground optics help maintain the sharpness and contrast of larger lenses, and SteadyShot® image stabilization helps reduce blur caused by camera shake.

2.7" wide Clear Photo™ LCD (230k)

The 2.7" (16:9) Clear Photo™ LCD (230K) displays sharp, bright, vivid images, letting you compose a shot more easily -- even outdoors, while enabling you to change settings to best represent the scene.

Shoot high quality AVCHD or web optimized MP4 video

Select between HD video in the AVCHD or MP4 format for highest quality or easy transfer and sharing.AVCHD provides premium video that can be enjoyed on large screen HDTVs, and is ideal for capturing precious memories at special occasions, family vacations and other moments you want to treasure for a lifetime. MP4 is great for those moments that you want to quickly share on your social networks or store on the cloud.

Highlight Playback creates movies with transitions for you

Why spend hours editing your movies when you can let your camcorder do it for you? Highlight Playback identifies and compiles key scenes into a short, entertaining movie complete with music and transitions. You can even pinpoint the exact scene you want to include in the highlight reel.

Direct Copy to external HDD without PC[13]

Store your memories in a whole new way with the ability to copy videos from your camcorder directly to an external hard disk drive[13] (sold separately), all without a computer. Your camcorder can also access videos stored on the external hard drive for playback on your HDTV[4], allowing you to utilize the camcorder's handy playback features.

Built-in USB cable for easy file transfer/charge

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The high-speed, built-in USB 2.0 cable allows for easy connection to your computer for charging or file transfer without having to remember separate cables. It also fits conveniently into the hand strap so it's out of the way until you need it. Charging your camcorder is faster than ever now through the USB; for every two minutes of charge time you get one minute of recording time.

Intelligent Auto (60 different scene combinations possible)

Intelligent Auto mode goes a step beyond traditional auto modes by analyzing your shot and then automatically selecting the appropriate settings from ten distinct scene modes and wind noise reduction. There are 60 different combinations possible: Portrait, Baby, Tripod , Backlight, Landscape, Spotlight, Twilight, Macro, Low light.

Specifications

Camera	
Camera Type	Digital HD Video Camera Recorder w/ Projector
Imaging Sensor	
Imaging Sensor	1/5.8" (3.1mm) back-illuminated Exmor® R CMOS Sensor
Processor	BIONZ® image processor
Pixel Gross	Approx. 2390K pixels
Effective Picture Resolution	Movie: Approx. 2150K pixels (16:9) Still: Approx. 2290K pixels (16:9)
Color Filter System	RGB primary color filters
Recording	
Media Type	Internal Flash Memory; Memory Stick PRO Duo™ (Mark 2); Memory Stick PRO-HG Duo™; Memory Stick XC-HG Duo™; SD/SDHC/SDXC Memory Card (Class 4 or Higher)
Still Image Mode	JPEG
Still Image Max Effective Resolution	8.9 megapixels
Still Image Size 16:9	Movie Mode: 8.9 megapixels 16:9 (3984x2240); Photo Mode: 8.9 megapixels 16:9 (3984x2240)
Still Image Size 4:3	Movie Mode: 6.7 megapixels 4:3 (2992x2240); Photo Mode: 6.7 megapixels 4:3 (2992x2240)
Video Mode	HD: MPEG4-AVC/H.264 AVCHD 2.0 format.compatible; STD: MPEG2-PS; MP4: MPEG-4 AVC/H.264
Video Resolution	HD:1920x1080/60p (PS), 60i (FX,FH), 1440x1080/60i (HQ,LP); STD: 720x480/60i; MP4: 1280x720 30p
Video Actual (Pixel)	Approx. 2150K pixels (16:9), Approx. 1610K pixels (4:3)
Video Signal	HDTV, NTSC color, EIA standards
Recording and Playback Times (in Internal Media)(2ch)	HD PS: 35m; HD FX: 45m; HD FH: 1h00m; HD HQ: 1h45m; HD LP: 3h10m; STD HQ: 1h50m (Times are approximate; max time); MP4: 2hr40min
Photo Capture from Movie	2.1 megapixels 16:9 (1920x1080); 0.3 megapixels 4:3 (640x480); 0.2 megapixels 16:9 (640x360)
Dual Record	8.9 megapixels 16:9 (3984x2240); 2.1 megapixels 16:9 (1920x1080)
Audio Format	Dolby® Digital 2ch Stereo, Dolby® Digital Stereo Creator; MPEG-4 AAC-LC 2ch
Microphone/Speaker	Built-in Zoom Microphone; Monoral Speaker
Internal Media	Flash Memory 8GB
Mic Level Control	Yes (2steps)
Movie Recording Rate(Average Bit Rate/VBR)	HD PS: 28Mbps / FX: 24Mbps / FH: 17Mbps / HQ: 9Mbps / LP: 5Mbps (Approx) STD HQ: 9Mbps MP4: Approx. 6Mbps
Still Image File Format	DCF Ver.2.0 compatible, Exif Ver.2.3 compatible, MPF Baseline compatible
Wind Position	Yes (Off/On)
Optics/Lens	
Lens Type	Carl Zeiss® Vario-Tessar® Lens
Lens Stabilization	SteadyShot™ image stabilization w/ Active mode (Wide to Tele)
Aperture	F1.9-F4.0
Optical Zoom	27x

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Digital Zoom	320x
Focal Length (35mm equivalent)	Movie Mode: 29.8-953.6mm (16:9), 36.4-1164.8mm (4:3); Photo Mode: 29.8-804.0mm(16:9), 36.4-984.0mm (4:3)
Minimum Focus Distance	Approx. 1cm (Wide), Approx. 80cm (Tele), Approx.37cm (Tele Macro)
Extended Zoom	32x
Focal Distance	f=2.1-57.0mm; f=3/32-2 1/4inch
LCD Display	
LCD Type	2.7" (6.7cm) Clear Photo LCD™ (230K) Wide (16:9)
Angle Adjustment	Opening Angle: max.90 deg., Turning Angle: max.270 deg.
Brightness Control	Yes (Menu)
Coverage	100%
Grid Display	Grid Line
Focus Control	
Focus System	Contrast AF
AF Modes	Auto / Manual (Menu)
Focus Area	Full range Focus
Exposure System	
Metering Modes	Multi-segment
Exposure Settings	Auto; Manual (Menu)
Scene Mode(s)	Auto / Night Scene / Sunrise & Sunset / Fireworks / Landscape / Portrait / Spotlight / Beach / Snow
D-Range Optimizer	Yes
Noise Reduction	Yes
White Balance Mode	Auto / Onepush / Outdoor / Indoor
Minimum Illumination	Standard: 6 lux (1/30 Shutter Speed); Low Lux: 3 lux (1/30 Shutter Speed)
Auto Iris Control	F1.9 - F10
Backlight Compensation	Yes (Auto)
LOW LUX Mode	Yes
Drive System	
Drive Mode	Photo Mode: Single-shot / Self-timer
Self-timer	Approx. 10sec. (Still Image)
Shutter Speeds	Shutter Speed (Standard): 1/30 - 1/10,000; Shutter Speed (Auto Control Range)
Convenience Features	
Manual / Auto Lens Cover	Manual
Fader Effect(s)	White / Black
Date / Time Stamp	Yes (Rec Date and Time, Camera info)
Erase/Protect	Yes / Yes
Media/Battery Indicator	Yes (recordable time, free and used media space)/Yes(recordable time, remaining capacity)
Power Save Mode	Yes
Still Image Playback Options	Slide Show
Video Playback Options	Highlight Playback (HD Movie Only); Highlight Playback Save and Share (Translate into STD quality); Highlight Scenario (Save/Playback/Erase); Hightlight BGM (Preinstalled 4 music files, Music transfer)
Built-in USB Cable	Yes (USB Charge Available)
Multiple Language Display	English; Spanish; Brazilian Portugese; Canadian French
Self Recording	Yes
View & Index	Event
Advanced Features	
Face Detection	Yes

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Image Stabilization	SteadyShot™ image stabilization w/ Active mode (Wide to Tele)
Intelligent Auto	Portrait / Baby / Tripod / Backlight / Landscape / Spotlight / Twilight / Macro / Low light
Priority Setting (for Face Detection)	Auto / Child Priority / Adult Priority
Smile Shutter™ technology	Dual Capture / Always On / Off
x.v.Color™	Yes
Interface	
Memory Card Slot	Memory Stick PRO Duo™ and SD/SDHC/SDXC compatible
SD Output	Composite Video Out (AV CABLE (sold separately))
HD Output	HDMI Out (micro)(supplied)
USB Port(s)	TypeA (built-in) / USB2.0 Hi-speed (mass-storage/MTP)
BRAVIA® Sync™	Yes
PhotoTV HD	Yes
Direct Copy	Yes
DC IN	Yes
HDMI Terminal	Yes (HDMI micro)
Multi/Micro USB Terminal	Yes
Weights and Measurements	
Dimensions (Approx.)	Approx. 2 3/8inch x 2 1/4inch x 4 5/8inch (58mm x 57mm x 117mm)
Weight (Approx.)	Approx. 7.4oz ((210g) Main Unit Only)
Power	
Power Requirements	6.8V/7.2V (battery pack); 8.4V (AC Adaptor)
Battery Type	InfoLITHIUM® with AccuPower™ Meter System (V Series)
Software	
Supplied Software	PC: PlayMemories Home Lite (built-in; for PC only); PlayMemories Home (by download); Music Transfer (by download); MAC: Music Transfer (by download); PlayMemories Online Uploader (by download)
Operating System Compatibility	Windows XP SP3/Windows Vista SP2 /Windows7 64-bit editions and Starter (Edition) are not supported. The Windows Image Mastering API (IMAPI) Ver. 2.0 or later is required to use the function for creating discs. Starter (Edition) are not supported. Standard installation is required. Operation is not assured if the above OS has been upgraded or in a multi-boot environment.
Service and Warranty Information	
Limited Warranty Term	Limited Warranty --- 1 Year Parts; 90 Days Labor
Accessories	
Supplied Accessories	Rechargeable Battery Pack (NP-FV30) (1) HDMI(micro) Cable (1) USB Connection Support Cable (1) Operating Guide (1)

1. 1GB equals 1 billion bytes, a portion of which is used for data management functions
4. Requires HDTV and HDMI cable sold sep.
9. For PC: Requires Microsoft® Windows® XP SP3/ Windows V Ista® SP2/Windows 7. For Mac: Requires Mac OSX (v10.5-10.7)
13. Requires via VMC-UAM1 cable (sold separately), AC power for camcorder, and hard drive formatted in FAT-32. USB-hub not supported. External HHD/USB media should be less than 2TB(Terabytes)

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